

Filed: 18 January 2006

PRELIMINARY AMENDMENT

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Original) A polymer composition comprising glycolic acid (GA) as a co-polymer with at least one other bioresorbable monomer, or a functional derivative of said co-polymer, having a tensile strength of at least 1100MPa.
2. (Currently Amended) A The polymer composition as claimed in claim 1, in which there are two bioresorbable monomers.
3. (Currently Amended) A The polymer composition as claimed in either claim 1 or ~~claim 2~~ in which the at least one other bioresorbable monomer is poly lactic acid (PLA).
4. (Currently Amended) A The polymer composition as claimed in any preceding claim 1 in which the at least one other bioresorbable monomer is poly L-lactic acid (PLA).
5. (Currently Amended) A The polymer composition as claimed in any preceding claim 1 in which the GA composition is at least 70% glycolic acid.
6. (Currently Amended) A The polymer composition as claimed in claim 5 in which the GA composition is at least 75, 80, 85, 90 or 95% glycolic acid.
7. (Currently Amended) A The polymer composition as claimed in claim 4 or ~~5~~ in which the polymer composition is around 95% glycolic acid.
8. (Currently Amended) A The polymer composition as claimed in any one of claims 4 or ~~5~~ claim 4 in which the polymer composition is around 98% glycolic acid.

Filed: 18 January 2006

PRELIMINARY AMENDMENT

9. (Currently Amended) An artefact comprising strengthened glycolic acid polymer composition as ~~according to any one of claims 1 to 7~~ claimed in claim 1.

10. (Currently Amended) ~~A~~ The polymer composition as claimed in ~~any preceding claim 1~~ in which the fibres have a tensile modulus of at least 20GPa~~20GPa~~.

11. (Currently Amended) ~~A~~ The polymer composition as claimed in ~~any preceding claim 1~~ in which the fibres have a tensile modulus of at least 21GPa.

12. (Currently Amended) ~~A~~ The polymer composition as claimed in ~~any preceding claim 1~~ in which the fibres have a tensile modulus of at least 220GPa.

13. (Currently Amended) A process for the manufacture of a polymer composition as claimed in ~~any one of the preceding claims~~ claim 1 which includes the steps of:

- a) forming the polymer composition comprising glycolic acid as a copolymer with at least one other bioresorbable monomer, or a functional derivative thereof, into fibre;
- b) quenching the fibres; ~~then; and~~
- c) thereafter subjecting the quenched fibres to a tension under conditions whereby a defined region of the tensioned fibres is drawn.

14. (Currently Amended) ~~A~~ The process according to claim 13 in which the fibre forming method is melt extrusion or solution spinning.

15. (Currently Amended) ~~A~~ The process according to claims 13 or 14 claim 13 in which the quenched, tensioned fibres are subjected to zone-heating.

16. (Currently Amended) ~~A~~ The process according to claims 13 to 15 claim 13 in which the quenched, tensioned fibres are subjected to at least two separate drawing steps, each drawing step performed under identical or different conditions.

Filed: 18 January 2006

PRELIMINARY AMENDMENT

17. (Currently Amended) An artefact comprising a polymer composition, or a functional derivative thereof according to ~~any one or claims 1 to 12~~ claim 1 or when produced by a process according to ~~any one of claims 13 to 16~~ claim 13.

18. (Currently Amended) ~~An~~ The artefact of claim 17 comprising at least two polymer components.

19. (Currently Amended) ~~An~~ The artefact of claim 18 comprising 10% to 80% by volume the polymer composition or a functional derivative thereof according to ~~any one of claims 1 to 12~~ claim 1 or when produced by a process according to ~~any one of claims 13 to 16~~ claim 13.

20. (Currently Amended) ~~An~~ The artefact of ~~any one of claims 17 to 19~~ claim 17 in which at least one of the polymer components is bioresorbable.

21. (Currently Amended) ~~An~~ The artefact of claim 20 in which the bioresorbable polymer comprises a poly-hydroxy acid, a poly-lactic acid, a poly-caprolactone, a poly-acetal or a poly-anhydride.

22. (Currently Amended) ~~An~~ The artefact of ~~any one of claims 17 to 21~~ claim 17 comprising at least one non-bioresorbable polymer component.

23. (Currently Amended) ~~An~~ The artefact of claim 22 in which the non-bioresorbable polymer comprises poly-propylene, poly-ethylene, poly-methyl methacrylate or epoxy resin.

24. (Currently Amended) ~~An~~ The artefact of ~~any one of claims 17 to 23~~ claim 17 further containing at least one ~~non-polymeric~~ non-polymeric component.

25. (Currently Amended) ~~An~~ The artefact of claim ~~25~~ 24 in which the non-polymeric component comprises a ceramic, hydroxyapatite or tricalcium phosphate.

Filed: 18 January 2006

PRELIMINARY AMENDMENT

26. (Currently Amended) ~~An~~ The artefact of claim 25 or 26 in which the ~~non-polymeric~~ non-polymeric component comprises a bioactive factor.

27. (Currently Amended) ~~An~~ The artefact of claim 27-26 in which the bioactive component comprises a natural or engineered protein, a ribonucleic acid, a deoxyribonucleic acid, a growth factor, a cytokine, an angiogenic factor or an antibody.

28. (Currently Amended) ~~An~~ The artefact according to ~~any one of claims 17 to 27~~ claim 17 in which the artefact is in the form of a medical device.

29. (Currently Amended) ~~An~~ The artefact of claim 28 in which the device is a suture, a scaffold for tissue engineering or implantation, an orthopaedics implant, a complex shaped device or a bone fixation device.

30. (Currently Amended) A process to manufacture an artefact according to ~~any one of claims 17 to 29~~ claim 17 comprising the steps of:

- a) placing appropriate lengths of strengthened glycolic acid polymer composition as according to ~~any one of claims 1 to 7~~ claim 1, into moulds;
- b) adding and mixing any other components (and mixing); and
- c) compression moulding to the desired shape.

31. (Currently Amended) ~~A~~ The process to manufacture an artefact according to ~~any one of claims 17 to 29~~ claim 17 comprising the steps of:

- a) forming a polymeric component in the presence of strengthened glycolic acid polymer composition as according to ~~any one of claims 1 to 7~~ claim 1 and;
- b) in situ curing of the monomers or other precursors to form said polymeric component and artefact.

32. (Currently Amended) ~~A~~ The process for the manufacture of artefacts according to ~~any one of the claims 17 to 29~~ claim 17 which includes the step of:

compression moulding other polymeric, non-polymeric or blend of polymeric and non-polymeric components in the presence of said fibres.

33. (Currently Amended) ~~A~~ The process of claim 30 or 31 in which includes the step of compression moulding other polymeric, non-polymeric or blend of polymeric and non-polymeric components in the presence of said fibres.

34. (Currently Amended) ~~A~~ The process of claim 32 or 33 in which further includes the step of:

forming a polymeric component in the presence of said fibres by in situ curing of monomers or other precursors for said polymeric component.

35. (Currently Amended) ~~A~~ The process of claim 34 in which the monomer used does not liberate a by-product on polymerisation.

36. (Currently Amended) ~~A~~ The process of claim 34 or 35 in which at least one of the monomers is a ring opening monomer that opens to form a poly hydroxyl acid.

37. (Currently Amended) ~~A~~ The process of claim 36 in which at least one monomer is a lactide, a glycolide, a caprolactone, a carbonate or mixtures thereof.